

Claims 1, 6-9, 11-14, and 24 were rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura et al. in view of Sode et al. Applicants respectfully traverse this rejection to the extent it is maintained.

Claim 1 is directed to a method for purifying a target protein from a protein solution containing the target protein by using liquid chromatography. Claim 1 includes introducing the protein solution into a column filled with a packing agent for causing the packing agent to hold the target protein, and then eluting the target protein by using an eluent containing a hydroxyl-cholate. Claim 1 further includes that the packing agent is an ion-exchange resin containing a quaternary ammonium group as an ion-exchange group.

However, the references cited do not disclose or suggest the features of at least claim 1. Shimomura et al. is deficient at least because the reference neither discloses nor suggests the claimed specific glucose dehydrogenase nor the specific ion-exchange resin, namely an ion-exchange resin containing a quaternary ammonium group as an ion-exchange group. Sode et al. fails to remedy the deficiencies of Shimomura et al. While Sode et al. discusses glucose dehydrogenase from the genus *Burkholderia* having α , β , and γ subunits, Sode et al. does not disclose or suggest an ion-exchange resin containing a quaternary ammonium group as an ion-exchange group. Rather, the Sode et al. only generally references ion-exchange chromatography (see paragraph [0145]), but the reference does not disclose or suggest any specific method of chromatography. There is no reasonable basis to infer that the mere reference to ion-exchange chromatography would suggest using the specific method of chromatography, namely using an ion-exchange resin containing a quaternary ammonium group as an ion-exchange group. In fact, Sode et al. describes an entirely different method of purifying the enzyme, which does not employ an ion-exchange resin containing a quaternary ammonium group as an ion-exchange group, and the subject matter of the reference is further removed. (See paragraphs [0173]-[0175] of the reference). Thus, even if the references could be combined, which Applicants do not concede, the combination fails to disclose or suggest the features claimed. For at least the foregoing reasons, Applicants respectfully submit that claim 1 and its dependents are patentable over Shimomura et al. and Sode et al.

Favorable reconsideration and withdrawal of the rejection are respectfully requested.

In view of the above remarks, Applicants believe that the pending claims are in a condition for allowance. A Notice of Allowance is respectfully solicited. If any questions arise regarding this communication, the Examiner is invited to contact Applicants' representative at the number listed below.



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Respectfully submitted,

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